

*Wabash River*

# 'Harvesting Water'

## Tells Wabash Story

5 APR 4 1977

In the nation and in the Indiana-Illinois Wabash valley the need is the same — to cherish and harvest the supply of precious water, says Joe Lackey, executive director of the Wabash Valley Association.

This is the basic aim of the Association, along with the proper utilization of the advantages the presence of the Wabash river gives to the residents of the two states.

Perspective is needed in surveying the possibilities of the Wabash.

Early settlers in Indiana sometimes met with a sad fate — epidemics wiped out whole villages. These came from various causes, including "milk" or undulant fever. There were also epidemics attributed to the presence of large marshland or swamp areas. There was therefore great pressure to drain these swamps, both to remove possible sources of contagion and to provide for more rich farmland.

These aims were accomplished, but in the process huge flocks of geese and ducks and other wildlife lost their habitat. But little of this process can be reversed.

As time has gone on there have been prolonged periods of dryness, where irrigation has been resorted to and when the water table has dropped so that wells are dry and the farmer must resort to hauling water.

On the other hand, there have been cases of severe erosion, where due to improper farming methods heavy rains wash away the soil.

It became recognized that the raindrop must be captured and con-

trolled. With governmental help bad plowing methods were corrected and thousands of farm ponds and low dams were constructed. Flood reservoirs also have been built.

As a result, disastrous floods have been alleviated and the draining of the water tables has been eased.

But obviously there is much more to be done.

Turning back again into history, it must be remembered that the Wabash and other streams were the vital access routes for early explorers and later for many settlers. Then later they served for the shipment of pioneer products such as pork, lumber and grain. They were replaced by the railroad and now the rail carriers are hard hit by highway competition. But with the increasing cost and scarcity of energy sources, water shipment — still the least expensive, but too slow for the pace of recent trade practices — may well again be essential.

The best realization of the benefits of the Wabash river is the objective of the Wabash Valley Association to which Mr. Lackey was called a few months ago as director. He has a pioneer background in southeastern Illinois and Knox county, Ind., where for years he was the executive director of the Chamber of Commerce.

From this background he preaches "harvesting water" and this week will join a two-state delegation to Washington to urge the enactment of legislation beneficial to the Valley.

WATER  
Supply

(over)

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Needless to say, the development of the Wabash resources must be carried out without violence to the best interests of the ecology. But at the same time, it must be realized that progress — and by this we mean the good of the people — cannot be achieved without cost or inconvenience.

For this reason the Association merits the continued strong support of the Wabash Valley public. The Valley raindrop is most precious and we must make the best use of it for ourselves and the future generations.

# Wabash River's Minimum Flow May Change With Future Use

8 JAN 12 1979

By GLADYS SELTZER  
Star Staff Writer

A preliminary draft of water resources in this area was presented Thursday at a public hearing attended by 37 citizens at the Terre Haute House sponsored by West Central Indiana Economic Development District.

The information was contained in the report from the Governor's Water Resources Study Commission. The report indicates future competing uses of the Wabash River water could affect the river's minimum stream flow.

The draft projected possible needs for uses of water, including recreation, public water supply, industrial supply, rural self-supplied water and irrigation.

One of the comments from the audience raised the question of whether all the recreation projects were necessary in relation to the over-all plan rather than "looking to providing food" on some of the land.

Bea Colson of the League of Women Voters suggested a precedent needs to be set for groundwater usages and priorities established.

Jack Jones expressed concern about flooding from Honey Creek in the Oak Road subdivision area and pointed out there were no upstream impoundments to control the creek and its "predicted flooding." He also referred to a letter from Robert Jackson, director of the water division of the state Department of Natural Resources, which stated "flooding of the Wabash River is not a problem" in the Oak Road area.

Jones also said Jackson made the recommendation the area was "not good for development" because of the elevation. Jones noted he owns 120 acres next to Honey Creek Square.

According to the preliminary draft presented, the projected increase in use of ground water in the region could result in problems such as the

reduction of stream flow if the wells are located adjacent to streams and the possibility of lowering the water level in existing wells in the immediate area.

There are some areas of the region which contains soils suited for irrigation where the water resource, ground or surface, is not "adequate to supply the needed water ... expected this will serve as a major constraint to general practice of irrigation in these areas," according to the report.

The report noted it is "vitally important that the ground water system be kept free from pollution" because of the total present and projected reliance upon this source for public water and rural water, and the "high degree of present and projected utilization of groundwater for self-supplied industrial water."

Projected surface water withdrawals for irrigation purposes probably would result in substantial reductions in low flows of streams, the report noted. Intensive development of ground water in localized areas can, when located along or near surface streams, "result in substantial diminution of low flows in the

stream."

No serious or long-term water resources problems were anticipated for swimming and ice skating, while the demands for public hunting lands is projected to about 54,000 acres by 1995 in addition to the existing supply and there appears to be "no reasonable prospect for filling this demand," the report states.

The bulk of flood damage is to the rural areas and generally narrow flood plains, thus limiting the number of acres protected per unit. Insofar as drainage in the area is concerned, the major problem here, and especially the system of legal drains, is "lack of adequate maintenance," according to the report.

Forty-five percent of the region is classified as having a high potential erosion hazard and five percent as a medium potential erosion hazard.

The meeting was chaired by Dr. Majorie Kessler, professor of speech at Indiana State University and a member of the commission. The seven-member commission team attending was headed by Dick Wawrzyniak, Department of Natural Resources.

WATER Supply

REFERENCE

Community Affairs File

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# A Water Resources Plan for the Wabash River Basin

By William J. Andrews  
Deputy Director, Indiana  
Department of Natural Resources

Indiana shares the Wabash River Basin with its sister states of Illinois and Ohio. But thanks to Paul Dresser, author of *On the Banks of the Wabash*, and to the later popular *Back Home Again in Indiana*, the Wabash River is forever firmly fixed in the public mind as a uniquely Indiana river.

There can be no doubt but that the Wabash forms a rich part of the Hoosier heritage. The exploits of George Rogers Clark, the pioneering social experiments at New Harmony, the *Battle of Tippecanoe* and the rugged beauty of Brown County—all these are dear to the hearts of every Hoosier.

But the Wabash plays another vital—even if more mundane—role in Indiana. 73% of its 33,100-square-mile Basin lies within the State. It drains, in whole or in part, 74 of our 92 counties. It contains five of our 10 largest cities, including Indianapolis, the State Capitol and the nation's 12th largest city.

In 1960, some 57% of the total State population lived within the Basin boundaries.

These few statistics will suffice to emphasize the importance of the Wabash Basin to our State. And as we look to the relatively near future, when our population will have doubled, we must be impressed with the fact that this population must be fed, clothed, housed and provided with employment.

*And these future Hoosiers must have a suitable environment in which to live.*

We must then look increasingly to the Wabash Basin, and to its rich natural resources of land, water and minerals, to assume a major role in

meeting these human and economic needs.

What are we doing to meet these needs which, in terms of time for planning, for decision-making and for development, are not problems for the distant future but for *today*?

In facing up to these problems, we must understand first of all that the already high and ever-increasing demands upon these resources are the demands of *people*. In the last analysis, they are not the demands of industry, of agriculture, of cities or of government—but the aggregate of your demands and of mine as individuals.

As we apply this concept to water resources, we see these human wants and needs expressed in a diversity of ways. They manifest themselves in terms of municipal, industrial and agricultural water supply, recreation, power, transportation, flood control, fish and wildlife, pollution abatement and scenic beauty.

At the same time, they are imposed upon a resource which, though constantly renewed through the operation of the hydrologic cycle, is fixed in the sense that *in so far as Nature is concerned we shall have neither more nor less in the future than we have now.*

The real import of this situation—that is, *a growing diversity of demands upon a finite resource*—lead to the realization that we could not afford the luxury of water resources planning and development on a project-by-project, single-purpose basis.

We came to realize the need for comprehensiveness and coordination, for responsiveness to all uses and needs for water, and for the necessity of the development of projects to serve multiple uses. And we came to understand that the River Basin itself is the logical unit for planning.

Out of this was born the Wabash River Basin Comprehensive Study. Comprehensive from the standpoint of consideration of all uses and needs for water; from the involvement of all levels of government, agencies and organizations; from the fact that the entire basin is being studied as a whole; and from the viewpoint of multi-purpose development.

The study, which began in 1962, has as its objective the formulation of a plan to provide for *the best use, or combination of uses, of the water and related land resources of the Wabash Basin to meet both short and long-term needs.*

The work is being done under the leadership of the U. S. Army Corps of Engineers, with the cooperation and participation of all of the Federal agencies having a significant role in water resources development, and of the States of Indiana, Illinois and Ohio. The study is scheduled for completion in July, 1970.

General coordination and policy direction for this water resources planning effort is achieved through the medium of a Coordination Committee composed of one representative from each of the Federal agencies and States. Federal agencies represented on the Committee include the following:

- Army Corps of Engineers
- Department of Agriculture
- Soil Conservation Service
- Forest Service
- Economic Research Service
- Department of the Interior
- Federal Water Pollution
- Control Administration
- Bureau of Sport Fisheries and Wildlife
- Bureau of Outdoor Recreation
- Geological Survey
- Bureau of Mines
- National Park Service



Federal Power Commission  
 Department of Health, Education and Welfare  
 Department of Transportation  
 Wabash Valley Interstate  
 Commission

The Director of the Department of Natural Resources represents Indiana on the Committee. Illinois is represented by its Division of Waterways and Ohio by its Department of Natural Resources.

During the course of the Comprehensive Study, three interim reports covering major reservoir projects have been submitted to the United States Congress for consideration.

**Looking Down the Historic Wabash from Beautiful Lincoln Memorial Bridge, with Vincennes on the Left Bank.**

These reports recommended construction of seven reservoirs in Indiana: Big Pine Reservoir, located on Big Pine Creek above Williamsport in Warren County; Lafayette Reservoir, located on Wildcat Creek above Lafayette in Tippecanoe and Carroll Counties; Patoka Reservoir, located on the Patoka River above Jasper in Dubois and Orange Counties; Clifty Creek Reservoir, located on Clifty Creek upstream from Columbus in Bartholomew and Decatur Counties; Big Walnut Creek Reser-

voir, located on Big Walnut Creek Greencastle in Putnam County; Downeyville Reservoir, located on Flatrock River Southeast of Shelbyville in Rush and Decatur Counties, and Big Blue Reservoir, located on Big Blue River near Carthage in Shelby, Hancock and Rush Counties.

A local protection project for Marion, Indiana, was also included in the third interim report. All of these projects have been authorized by Congress.

Early in 1969, the Coordinating Committee established five task forces to concurrently develop their respective elements necessary for con-

sideration in the formulation of plans and recommendation by the Coordinating Committee on its Summary Report. Also to serve as liaison between the Committee and the task forces, a Plan Formulation Subcommittee was created to provide overall direction and coordination of plan formulation activities and formulation and recommendation of a specific basin plan to the Coordinating Committee.

The Flood Damage Reduction Task Force is responsible for compiling a Basinwide inventory of estimated average annual present and projected future flood damages.

Further, it is to identify and evaluate feasible alternative means, both structural and non-structural, for reduction of the present and projected future flood damages. Alternatives to be considered will include reservoir storage, levees and floodwalls, channel improvements, watershed land treatment, floodwater diversion, flood-proofing, permanent relocation, redevelopment, flood plain zoning, flood insurance, flood warning and temporary evacuation.

The responsibility for compiling the basin-wide requirements for municipal and industrial water-supply and water-quality control has been assigned to the Water Supply and Water Quality Task Force. This complication will indicate both quantitative and qualitative water requirements.

Consideration will be given to various feasible alternative means for meeting the water supply and water quality needs of the Wabash River Basin. Alternatives will include surface storage, groundwater development, inter-basin transfer and application of advanced or tertiary waste processes for water quality control.

The Recreation, Fish and Wildlife and Environmental Resources Task Force has been charged with the responsibility of compiling estimates of Basin-wide needs for water and related land resources, general outdoor recreation and fish and wildlife recreation and enhancement.

Inventories of existing outdoor recreation facilities and of resource po-

tentials to meet additional present needs and projected future needs will be compiled. In addition, fish and wildlife resources and environmental resources (historical, archeological, ecological, etc.) of significant value will be inventoried.

Present and future land-use needs and the potentials to meet such needs to best serve the overall public interest are to be determined and evaluated by the Land Use Task Force. An inventory of present land uses as well as examination of land-use changes which have taken place since the last such inventory are being performed.

A Regional Development Task Force has been formed to inventory existing plans and planning studies under way by various public and private agencies for regional and/or local development which are not basically water oriented.

A review and appraisal of these plans and studies will be made to establish any identifiable needs for coordination of the Wabash Basin studies therewith, in order to avoid conflicts in program objectives and development and to effect optimization of benefits to the public.

The Task Force will attempt to identify future coordination measures necessary to achieve the same objectives in respect to planning studies now under way for regional or local developments and for those which are undertaken in the future.

A Public Information Subcommittee, which has the responsibility for recommending means of informing the public about the Wabash River basin study, was established in mid-year 1969.

The procedures used in carrying out the comprehensive study are complex. First, *economic analyses designed to project economic trends forward to the year 1980, 2000 and 2020 are made.*

Once these analyses have been completed in terms of population, employment, and other indications of economic growth, they are translated into requirements for the control and use of water. A wide variety of tech-

nical studies has been undertaken by the appropriate task force to determine the future needs as well as means of meeting the projected needs.

These technical studies are closely coordinated among the participants to insure that all alternatives have been considered and that the plan of development will be one which most nearly meets the needs of the Basin.

The recommendations in the final report of the Wabash River Basin Comprehensive Study will consist of the best possible mix of projects and programs, based upon consideration of national income efficiency, regional development, environmental quality and well-being of people.

The Coordinating Committee has recently concluded one series of working meetings throughout the Basin, to which interested officials and organizations were invited to hear Task Force reports of needs and possible measures to meet those needs.

A second series of public forum meetings is being planned, at which the preliminary plan will be presented and explained with a view toward obtaining constructive comment and criticism for consideration in preparing the overall Basin plan. This, in turn, will be followed by established procedures or review and comment by the various Federal agencies, the Governors of the States and the Water Resources Council.

And so every Hoosier should make it his business to acquaint himself with these plans and to express his views.

The process of public examination, constructive criticism and debate will result in better, more-soundly-conceived and more-socially acceptable programs.

*But the real task—that of implementing the plan—of making it a reality in timely and orderly fashion—lies before us and therein lies the challenge for the 1970s.*

This challenge will test us as we have never been tested before in regard to our water resources.



Let me remind you of some of the tests which must be faced:

1. The test of balance and perspective in water resources development. We must achieve an understanding, appreciation and respect for other needs and uses for water than those in which we may have a personal stake.
2. The test of cooperation and communication—the test of willingness to devote our tal-

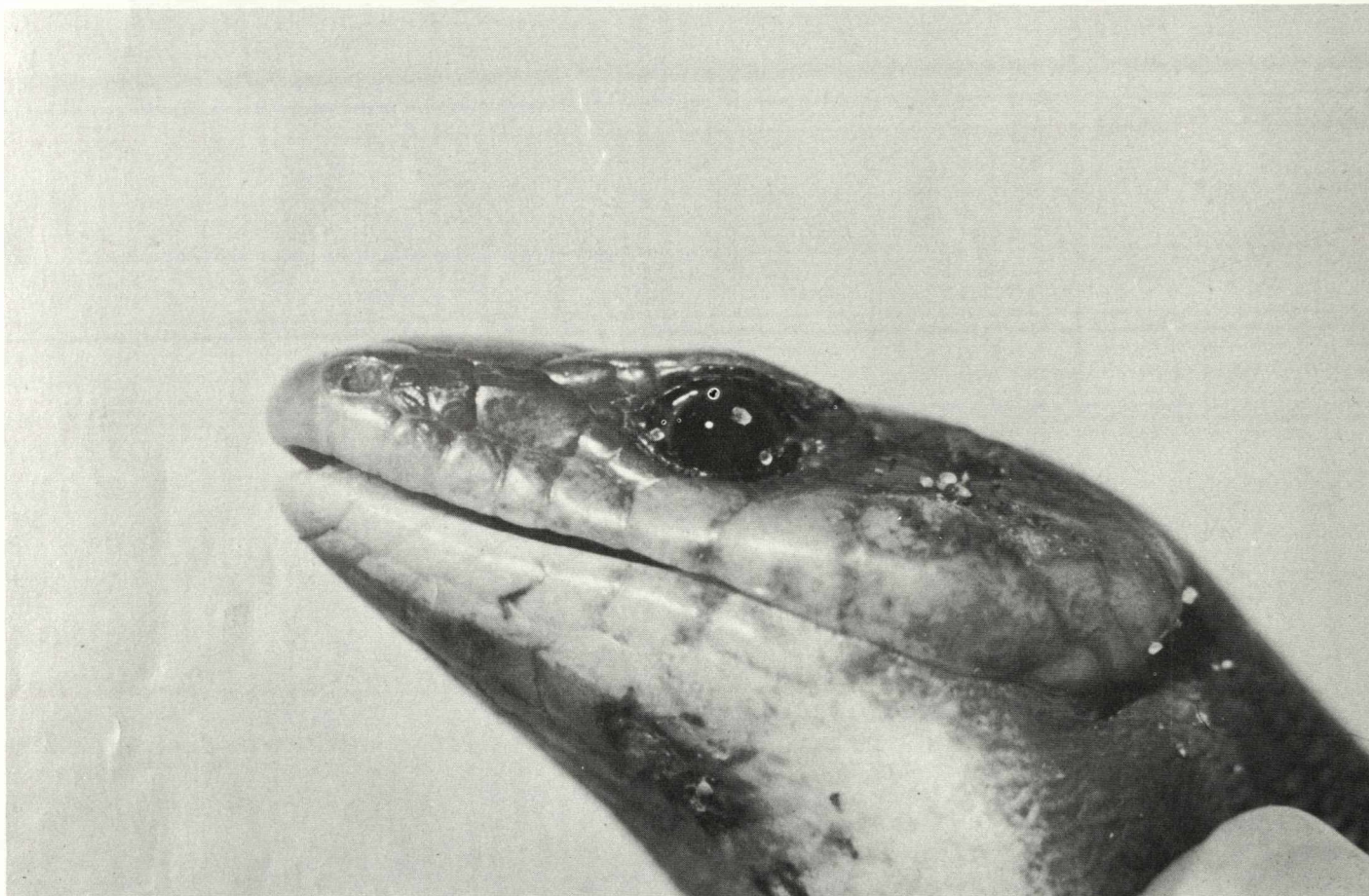
ents and energies to a unified effort.

3. The test of commitment. There is an old saying to the effect that “after all is said and done, there is a lot more said than there is done.” All of us—lay public and professional alike—say more than we do, and all of us know how to do better than we do.
4. The test of the pocketbook. The man who said “the best things in life are free” wasn’t

talking about providing adequate water for the needs of today and tomorrow!

And so Indiana’s view of the Wabash is that it is a vital part of the Hoosier States, that we must rely on the Basin and its resources to play a major role in supporting our population and economy, that we shall soon have a chart for the development of its water resources to meet that role, and that our challenge now is to get on with the job set before us.

# SKINKS AND SUCH



By William B. Hopp  
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A flash of blue as a small yellow-striped black lizard with a metallic blue tail scurries across a pile of old sawdust—an olive-tan, heavy-jowled lizard with a copper-red head glaring out of a hollow in an old log—two kinds of lizards?

That was the assumption of early naturalists. But more detailed observations indicated that these were different stages in the maturation of a single species, the *five-lined skink* (*Eumeces fasciatus*).

Even this was later qualified, for, although the *five-lined skink* is found throughout Indiana, its range in the Southern half of the State is overlapped by that of another species, the *broad-headed skink* (*Eumeces laticeps*).

## An Adult Male Broad-headed Skink.

Both species share the same developmental color variations and live, in general, in similar habitats.

Actually, except for variations in the number and arrangement of certain scales and the maximum size of the adult males (seven inches for the *five-lined skink* to 12 inches for the *broad-headed skink*), the two species are so similar that only a scientist (or another *skink*) would notice the difference. The juvenile *five-lined skink* is also called a *blue-tailed skink*.

The *skinks* are a family of smooth-scaled, shiny, active lizards, various members of which are found throughout the world.

They move rapidly and are hard to catch. If you do manage to grab one, it may surprise you by losing its tail.

The ability to “shed” the tail is rather commonly found among many

(but not all) kinds of lizards. It does not harm the animal, which readily grows a replacement, but the action frequently furnishes a distraction for the lizard’s enemy. While the attacker is attempting to deal with the still actively-threshing tail, the lizard is able to slip quietly away.

Although the *skinks* are generally regarded as ground-dwelling, they may be found climbing to considerable heights on dead and decaying trees, snags and old buildings.

Old sawdust piles, decaying stumps and logs, woodlots and similar situations are good places to look for *skinks*, since these surroundings abound in the insects, spiders and other arthropods upon which the lizards feed.

Of course, the larger adults may prey on larger forms, even baby mice and baby birds.